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AFCES A



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products of
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TARGET AUDIENCE: Operations and Readiness Flights

Pavement Spall Repair

SYNOPSIS:

During Operations ENDURING FREEDOM and IRAQI FREEDOM, spall repair has been a challenge for the civil engineering community. While procedures are well-defined and there are many materials available for doing permanent spall repair on concrete and asphalt pavements, there are not many products or techniques approved for expedient spall repair. This A-Gram provides information on suitable methods and materials for permanent and expedient spall repair.

SPALL REPAIR METHODS:

1. **Concrete Repair.** Full depth repairs replace the full depth of the pavement on a portion of a distressed slab while maintaining the integrity of all joints. Partial depth repairs are necessary when the upper third of the slab is deteriorated and load transfer devices are still functional. Reference UFC 03-270-03 and -04 (http://65.204.17.188/report/doc_ufc.html).
2. **Asphalt Repair.** Either full- or partial-depth removal of asphalt (and possibly base) and replacement with suitable materials. Reference UFC 03-270-01 and -02 (http://65.204.17.188/report/doc_ufc.html).
3. **Expedient Repair.** Temporary repair that involves debris removal and placement of the repair material without saw-cutting.

RECOMMENDED PRODUCTS:

Concrete Products for Spall Repair Method 1

1. **Any Type I or Type III cement available.** Note that set times will be longer with these products than with rapid-setting products.
2. **Five Star Highway Patch.** Product manufactured by U.S. GROUT CORP requires only mixing water to produce a rapid strength-gaining material for concrete repairs. Call 203-336-7900 for more information. Available in Dubai, UAE; contact Mr. Peter Gaskin at 971-4-343-1212.

Bituminous Asphalt Products for Spall Repair Method 2

1. **Hydro-Patch.** Cold-patch material manufactured by Ophir Oil Co. is a blend of aggregate, emulsified asphalt and modifiers. Call 601-634-2731 for more information.
2. **Sta-Fil.** Cold-patch material manufactured by Revere Chemical Corp. is a blend of asphalt cement, vinyl-binding additive and aggregate. Call 800-321-1976 for more information. This product can be shipped to the AOR.

Product for Expedient Spall Repair Method 3

1. **PaveMend.** Quick-set material from CeraTech, Inc., is good for both asphalt and concrete repairs. NSN 6850-01-500-6998, 30-minute mix for hot climate use. NSN 6850-01-500-6996, 15-minute mix currently being used in AOR operations. Call 202-589-1177 for more information.
2. **ABC Cement.** Quick-setting material currently in use in AOR good for both concrete and asphalt repairs. Trying to obtain NSN for this item. For more information, contact ABC Cement Corp. at 954-786-2940.

FURTHER DETAILS:

There are other products available for Methods 1 and 2, and new materials are being tested for expedient repair. For a complete list of repair materials, check the fact sheets located on the PCASE Web site: <http://www.pcase.com/triservice>

Disclaimer: The mention of specific commercial products in this A-Gram does not constitute an official endorsement by the U.S. Air Force or the Department of Defense.